ENDEMIC AMŒBIC DYSENTERY IN NEW YORK, WITH A REVIEW OF ITS DISTRIBUTION IN NORTH AMERICA.

By Henry S. Patterson, M.D.,
ASSOCIATE IN APPLIED THERAPEUTICS IN THE COLLEGE OF PHYSICIANS AND SURGEONS,
COLUMBIA UNIVERSITY, NEW YORK; DEPUTY ATTENDING PHYSICIAN TO
THE HUDSON STREET HOSPITAL, NEW YORK.

The infrequency with which endemic amœbic dysentery is met in New York, and the prevailing belief that it is a disease of the tropics justify recording the following cases. Only the essential facts of the histories are included:

Case I.—S. W. McG., admitted to the Vanderbilt Clinic July 7, 1908; history 39,054; aged nineteen years; U. S.; single; electrician.

In September, 1907, the patient was suddenly taken with a cutting pain about the navel, intermittent, and lasting four days, at the end of which he began to pass "brown slime" which "looked like tobacco juice." At first he had as many as seven passages at night, accompanied by pain in the abdomen and rectal tenesmus. The diarrhœa kept up with variable intensity until a week before admission, when the symptoms became so much worse that he had to come to the clinic for relief. He had lost twenty pounds. At one time during his illness he was admitted to a hospital, but a stool was never examined. *He had not been off Manhattan Island since one day in the first two weeks of June*, 1907. On admission, the temperature was 98.2°; pulse, 92; respirations, 24; and the weight 112 pounds. He was poorly nourished and wasted. The tongue was moist and slightly coated. There was no lymphatic enlargement.

The heart was negative. The pulse was of good size and force. Physical examination otherwise was negative.

On July 8 a fresh stool was examined, and found to contain bodies like amœbæ, but no motility was seen. The proctoscope was passed and some bloody mucus obtained, which contained many actively motile amœbæ.

Case II.—W. K., admitted January 20, 1909; history 61,986; aged twenty-eight years; married; longshoreman.

Four years ago he began to have bloody diarrhœa, with about two stools at night and three in the day. For the last two years the diarrhœa has been more severe, with four to five stools in the day time, and an equal number at night. He has lost considerable strength, but no weight. No other symptoms. On admission he was well nourished, but pale. No abnormal physical signs were found. By the proctoscope bloody mucus containing a few motile amœbæ and many similar inactive bodies, was obtained.

On January 21, mucus obtained through the proctoscope and examined on a warm stage showed a fair number of motile amœbæ.

The patient states that he was born, brought up, and always lived in Fishkill up to two years ago. (Fishkill is on the east bank of the Hudson, about sixty-six miles from New York.) He has never been outside of New York State except to unload bricks in New Jersey opposite New York City. For about seven years previous to his illness he had been working on a brick boat, plying between New York and Fishkill. The drinking water was at times taken from the river near Fishkill, when the water, after a rain, was not brackish, and allowed to stand in a barrel.

CASE III.—Clinic number 76,899; male, aged thirty-eight years; Russian; married; calciminer; admitted to the Vanderbilt Clinic May 19, 1909.

The family history and the past history are unimportant.

The patient came to America six years ago, and since his arrival has lived continuously in Brooklyn. In August, 1908, he developed dysentery, and was in a Brooklyn hospital for four months. He now has six or seven watery and bloody stools a day. Physical examination was negative.

On May 21, 1909, sigmoidoscopic examination showed small, superficial ulcerations; one just inside the sphincter was sloughing. Mucus examined microscopically on a warm stage showed fairly numerous motile amœbæ coli.

In the first case the patient was undoubtedly infected in New York City. Musgrave and Clegg,[1] whose admirable work of growing the amœba in symbiosis with bacteria harmless to animals and man marks an epoch in our knowledge of amœbiasis, found that in animals fed on cultures the period of incubation was from twenty to seventy days. Injections produced focal lesions containing amœbæ as early as the second day. To a healthy man, who had been observed ten days, three gelatin capsules were fed of three week's old cultures of amœba in symbiosis with a bacterium proved harmless to man and animals. On the twelfth day there was diarrhœa, and amœbæ for the first time were present in the stools. Consequently all the experimental evidence that Musgrave and Clegg have furnished would indicate that our first case was infected some time subsequent to his outing from the city.

Among New York physicians the belief is current that intestinal amœbiasis is to be expected only in persons recently returned from the tropics. Although an ill-defined impression exists in the minds of a few practitioners that occasional endemic cases of amœbic dysentery occur in New York, the existence of this condition is not as generally known as it should be, because the cases have been few and because systematic collection of them has never been presented to the profession. The important features of amœbic dysentery are not sufficiently sharply defined from those of other forms of colitis to enable one unacquainted with it to recognize the condition.

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[1] Bull. 18, Bureau of Gov. Lab., Manila, p. 1.

Consequently the only way the diagnosis can be made in the majority of endemic cases is to suspect that the condition exists.

The following collection of endemic cases in New York City is offered in the hope that it will stimulate efforts to recognize the disease and determine its exact frequency in this vicinity.

In 1893 Brannon[2] reported the case of an inhabitant of New York who had been a sailor in his youth, but had given up that occupation years before his illness began, to become a grocer. There is nothing in the history to indicate that he was infected outside of New York. In 1886 he had a liver abscess, and in the following six years he had a succession of five other such abscesses, to the last of which he succumbed in March, 1892. Amœbæ were found in the liver and colon postmortem.

At a meeting of the New York Academy of Medicine, in 1900, Graser[3] reported two endemic cases. One patient was a hotel keeper, aged thirty years, who had never been out of New York. The other patient had never been farther than Staten Island. At the same meeting, in commenting on a series of twelve cases in his own experience, Brooks[4] stated that two of them were certainly infected in New York. In the discussion of a paper by Dock,[5] in 1902, Libman said that within the last year at the Mount Sinai Hospital specimens from at least ten cases of amœbic abscess of the liver had been examined, from which no history of any residence outside of New York City could be obtained.

DISTRIBUTION THROUGHOUT NORTH AMERICA. *Canada.* The late Dr. A. Brayton Ball[6] reported a case in 1892 that originated in Winnipeg. This was the first case to be reported from New York City.

Maine. Lockwood's[7] case in all probability contracted the disease in Old Orchard Beach.

New Hampshire. One of the earliest American cases on record was that of Gerry and Fitz,[8] who, in 1891, contributed the history of a young woman, who was supposed to have contracted the disease in the White Mountains.

New York. Stockton[9] reported, in 1894, an endemic case from Buffalo. He mentions a case occurring in his practice the preceding year. Nydegger[10] mentions a case occurring in the practice of a medical friend in the northern part of the State.

Pennsylvania. Musser[11] was among the first to report endemic cases. In December, 1890, he reported from Philadelphia two hospital cases, and mentioned two occurring in private practice. About the same time Stengel[12] reported three, one of which was a private case alluded to by Musser. A few years later Musser and Willard[13] reported another case from Philadelphia.

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[2] New York Medical Journal, 1893, lvii, 317.

[3] Medical News, 1900, lxxvi, 433.

[4] Medical News, 1900, lxxvi, 433

[5] Jour. Amer. Med. Assoc., 1902, xxxix, 617.

[6] Therap. Gazette, 1892, 3 S. viii, 523.

[7] Medical Record, 1897, li, 475.

[8] Boston Medical and Surgical Journal, 1891, cxxv, 592.

[9] Internat. Clin., 4 S. i, 69.

[10] West Virigina Medical Journal, 1907, ii, 11.

[11] University Medical Magazine, 1890, iii, 116.

Maryland. In 1890 Lafleur[14] reported the first endemic case in this country. Since then Howard,[15] Street,[16] Preston and Rurah,[17] Lewis,[18] Amberg,[19] and Boggs,[20] have reported a large number of cases.

District of Columbia. In a series of cases treated at the Johns Hopkins Hospital, Boggs reported three from the District.

Virginia. In the series just alluded to, Boggs reported fourteen from this state. Slaughter[21] has reported a case probably infected in Richmond.

West Virginia. In the series reported by Boggs, eight acquired the disease in this State.

North Carolina contributed five cases to Bogg's series.

South Carolina. Wasdin[22] has reported three cases.

Georgia. Boggs has contributed four cases, Wasdin one, Harris[23] thirty-two, and Diamond[24] three.

Florida. Boggs has contributed two cases. I myself have seen two cases which were infected in this State.

Tennessee. Boggs' report includes one case from this State, while Harris has reported two.

Alabama. Boggs has reported four cases, Harris and Withington[25] one each, while Taylor[26] has reported a fatal case from the centre of the State.

Mississippi. McElroy[27] reports a case from Stovall.

Ohio. Eichberg,[28] in 1891, reported from Cincinnati a case of amœbic liver abscess, no statement being made that the case was imported.

Illinois. Kurtz[29] has contributed a case from Neoga, while Preble[30] from Chicago, reports two cases; the first patient had lived for nine years in the city, and had been in the country a few weeks, six months previous to the beginning of the illness. The second patient had not been out of Chicago for thirty years.

[12] Medical News, 1890, lvii, 500.

[13] University Medical Magazine, 1892, v, 525.

[14] Johns Hopkins Hospital Bulletin, 1890, i, 91.

[15] Medical News, 1892, lxi, 705.

[16] Maryland Medical Journal, 1893-94, xxx, 92.

[17] New York Medical Journal, 1894, lx, 593.

[18] Maryland Medical Journal, 1896, xxxv, 145.

[19] Johns Hopkins Hospital Bulletin, 1901, xii, 355.

[20] Virginia Medical Semimonthly, 1908, xiii, 9.

[21] Virginia Medical Monthly, 1895–96, xxii, 722.

[22] Medical News, 1891, lix, 656.

[23] AMER. JOUR. MED. SCI., 1898, N. S., cxv, 384.

[24] Phila. Med. Jour., 1900, v, 817.

[25] Boston Medical and Surgical Journal, 1894, cxxx, 516.

[26] Alabama Medical Journal, 1903–04, xvi, 10.

[27] Memphis Medical Monthly, 1902, xxii, 169.

[28] Medical Mews, 1891, lix, 201.

[29] Medicine, 1903, ix, 595.

[30] Chicago Medical Recorder, 1899, xvi, 33.

Missouri. Nietert[31] has reported seven cases which developed in or near St. Louis. Meyer[32] observed a case in St. Louis and mentioned one of Fischel's, while Funkhouser[33] has seen one originating in the same city. Murphy[34] has contributed a case from Kansas City.

Michigan. Dock, in 1902, reported one case infected in Michigan. The patient had not been out of the State since 1893. There is no history of any contamination by persons returning from the tropics.

Minnesota. Head,[35] in 1904, reported a case originating in Maple Lake, Itasca County, and in 1905 Aurand[36] a case in a millworker who had lived in Minneapolis many years and had never been South.

Montana. Spelman and Wherry,[37] in 1906, reported a case which was unquestionably infected in Montana.

Arkansas. One of West's[38] cases was probably infected in this state.

Indian Territory. West contribted one case from here.

Texas. Boggs has contributed to the literature two cases. Hektoen[39] has reported one, Dock,[40] in one report, one case, in a second,[41] twelve, Diamond[42] two cases, and West three.

The review of the literature on this subject shows, therefore, that the prevailing idea concerning the source of amœbic infection is hardly justifiable. Probably this erroneous belief has been responsible for failure to recognize the disease. A realization that this type of disease is endemic in New York led to a search for it, with a result that these three cases were found within a year. It is to be hoped that a realization of its existence elsewhere will give rise to the recognition of cases and to the establishment of proper prophylactic and therapeutic measures.

BLOOD CULTURES IN HUMAN GLANDERS.

By Burrill B. Crohn, M.D.,
FORMERLY PATHOLOGICAL INTERNE AT THE MOUNT SINAI HOSPITAL, NEW YORK.

The invasion of the blood current in cases of glanders in human subjects is of considerable scientific interest from three points of view: (1) By reason of the light which it throws on the pathological processes of the disease and the modes of dissemination of the infection; (2) on account of the valuable theoretical suggestions in

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[31] St. Louis Medical Review, 1902, xlvi, 55.
[32] Ibid., 19.
[33] Ibid., 1903, xlviii, 343.
[34] Journal of the American Medical Association, 1894, xxii, 149.
[35] Northwest Lancet, 1904, xxiv, 249.
[36] Ibid., 1905, xxv, 321.
[37] Ibid., 1906, iv, 277.
[38] Trans. First Pan Amer. Med. Cong., 1893, i, 301.
[39] North. Amer. Pract., 1892, iv, 554.
[40] Medical Record, 1891, xl, 7.
[41] Quoted by Harris.
[42] Philadelphia Medical Journal, 1900, v, 817.